

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-59. (Cancelled).

60. (previously presented): A method according to claim 89 in which the solvent is organic and which additionally comprises, following step b), a step:

c) drying the treated implant to remove the solvent.

61. (previously presented): A method according to claim 60 in which the removal is by evaporation.

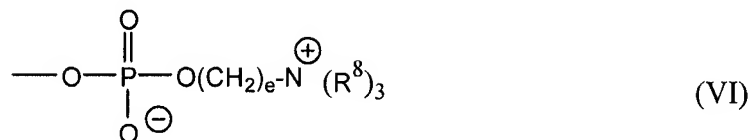
62. (previously presented): A method according to claim 89 in which the implant is a stent.

63. (previously presented): A method according to claim 62 in which the stent is mounted on a delivery device prior to said contacting step b).

64.-65. (canceled).

66. (currently amended): A method according to claim 8965 in which Q^3 is a group SiR^4_3 in which R^4 is a C_{1-4} alkoxy group or a halogen atom.

67. (currently amended): A method according to claim 8965 in which X is a group of formula VI



where the groups R^8 are the same or different and each is hydrogen or C_{1-4} alkyl, and e is from 1 to 6.

68. (currently amended): A method according to claim 8965 in which Q^1 is selected from the group consisting of N^+R^5_3 , P^+R^5_3 and S^+R^5_2

in which the groups R^5 are the same or different and are each selected from the group consisting of hydrogen, C_{1-4} -alkyl and aryl, or two of the groups R^5 together with the heteroatom to which they are attached form a saturated or unsaturated heterocyclic ring containing from 5 to 7 atoms.

69. (currently amended): A method according to claim 8965 in which the groups Y , Y^1 and Y^3 all have the general formula $\text{CH}_2=\text{C(R)C(O)A-}$ in which A is $-\text{O}-$ or $-\text{NR}^1$ where R^1 is hydrogen or a C_{1-4} alkyl group, and R is hydrogen or a C_{1-4} alkyl group.

70-72. (canceled).

73. (previously presented): A method according to claim 77 in which the solvent is organic and which additionally comprises, following step b), a step:

c) drying the treated implant to remove the solvent.

74. (previously presented): A method according to claim 73 in which the removal is by evaporation.

75. (previously presented): A method according to claim 77 in which the implant is a stent.

76. (previously presented): A method according to claim 75 in which the stent is mounted on a delivery device prior to said contacting step b).

77. (currently amended): A method of producing an implant loaded with a pharmaceutical active comprising the steps:

- a) providing a coated implant having a coating of cross-linked water-swella-
ble polymer matrix on its external surface, the cross-linked water-swella-
ble polymer matrix comprising a polymer having pendant zwitterionic groups and pendant cationic groups; and
- b) contacting the coated implant with a solution or dispersion of a pharmaceutical
active which is a protein in an aqueous solvent, the protein being anionically charged at
physiological pH, whereby the solvent partially swells the polymer matrix and the
pharmaceutical active is absorbed into or adsorbed onto the polymer matrix,

wherein step a) comprises the sub-steps:

- a i) providing an uncoated implant;
- a ii) coating the implant with a cross-linkable polymer; and
- a iii) cross-linking the cross-linkable polymer to form the cross-linked water-
swella-
ble polymer matrix,

wherein the cross-linkable polymer is formed from ethylenically unsaturated monomers
including

- a) a zwitterionic monomer of the formula I



wherein B is a bond or a straight or branched alkylene, alkylene-oxa-alkylene or
alkylene-oligooxa-alkylene group, any of which optionally include one or more fluorine
substituents;

X is an organic group having a zwitterionic moiety; and

Y is an ethylenically unsaturated polymerisable group;

b) a cationic monomer of the formula II



wherein B¹ is a bond or a straight or branched alkylene, alkylene-oxa-alkylene or alkylene-oligooxa-alkylene group, any of which optionally includes one or more fluorine substituents;

Y¹ is an ethylenically unsaturated polymerisable group, and

Q¹ is an organic group having a cationic or cationisable moiety and

c) a crosslinkable monomer having the general formula IV:



wherein B³ is a bond or a straight or branched alkylene, alkylene-oxa-alkylene or alkylene-oligooxa-alkylene group any of which optionally includes one or more fluorine substituents;

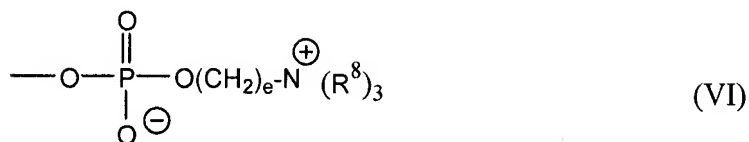
Y³ is an ethylenically unsaturated polymerisable group; and

Q³ is an organic group having a reactive group capable of cross-linking the polymer.

78. (canceled).

79. (currently amended): A method according to claim ~~7778~~ in which Q³ is a group SiR⁴₃ in which each R⁴ is a C₁₋₄ alkoxy group or a halogen atom.

80. (currently amended): A method according to claim ~~7778~~ in which X is a group of formula VI



where the groups R^8 are the same or different and each is hydrogen or C_{1-4} alkyl, and e is from 1 to 6.

81. (currently amended): A method according to claim ~~7778~~ in which Q^1 is selected from the group consisting of N^+R^5_3 , P^+R^5_3 and S^+R^5_2

in which the groups R^5 are the same or different and are each selected from the group consisting of hydrogen, C_{1-4} -alkyl and aryl, or two of the groups R^5 together with the heteroatom to which they are attached form a saturated or unsaturated heterocyclic ring containing from 5 to 7 atoms.

82. (currently amended): A method according to claim ~~7778~~ in which the groups Y , Y^1 and Y^3 all have the general formula $\text{CH}_2=\text{C(R)C(O)A-}$ in which A is $-\text{O}-$ or $-\text{NR}^1$ where R^1 is hydrogen or a C_{1-4} alkyl group, and R is hydrogen or a C_{1-4} alkyl group.

83. (previously presented): A method according to claim 77 in which the protein is an antibody or a fragment thereof.

84. (canceled).

85. (previously presented): A method according to claim 89 in which the nucleic acid is DNA or RNA.

86. (previously presented): A method according to claim 89 in which the nucleic acid has a molecular weight higher than 1kD.

87. (previously presented): A method according to claim 86 in which the nucleic acid has a molecular weight higher than 1.2kD.

88. (previously presented): A method according to claim 85 in which the nucleic acid is linear or circular and is single or double stranded.

89. (currently amended): A method of producing an implant loaded with a pharmaceutical active comprising the steps:

- a) providing a coated implant having a coating of cross-linked water-swellaable polymer matrix on its external surface, the cross-linked water-swellaable polymer matrix comprising a polymer having pendant zwitterionic groups and pendant cationic groups; and
- b) contacting the coated implant with a solution or dispersion of a pharmaceutical active which is a nucleic acid, in an aqueous solvent whereby the solvent partially swells the polymer matrix and the pharmaceutical active is absorbed into or adsorbed onto the polymer matrix,

wherein step a) comprises the sub-steps:

- a i) providing an uncoated implant;
- a ii) coating the implant with a cross-linkable polymer; and
- a iii) cross-linking the cross-linkable polymer to form the said cross-linked water-swellaable polymer matrix; and

the step b) of contacting the coated implant involves dipping the implant into a volume of the solution or dispersion,

wherein the cross-linkable polymer is formed from ethylenically unsaturated monomers including

- a) a zwitterionic monomer of the formula I

YBX I

wherein B is a bond or a straight or branched alkylene, alkylene-oxa-alkylene or alkylene-oligooxa-alkylene group, any of which optionally include one or more fluorine substituents;

X is an organic group having a zwitterionic moiety; and

Y is an ethylenically unsaturated polymerisable group;

b) a cationic monomer of the formula II

Y¹B¹Q¹ II

wherein B¹ is a bond or a straight or branched alkylene, alkylene-oxa-alkylene or alkylene-oligooxa-alkylene group, any of which optionally includes one or more fluorine substituents;

Y¹ is an ethylenically unsaturated polymerisable group, and

Q is an organic group having a cationic or cationisable moiety and

c) a crosslinkable monomer having the general formula IV:

Y³B³Q³ IV

wherein B³ is a bond or a straight or branched alkylene, alkylene-oxa-alkylene or alkylene-oligooxa-alkylene group, any of which optionally includes one or more fluorine substituents;

Y³ is an ethylenically unsaturated polymerisable group; and

Q³ is an organic group having a reactive group capable of cross-linking the polymer.

90. (previously presented): A method according to claim 77 in which the step b) of contacting the coated implant involves dipping the implant into a volume of the solution or dispersion.

91. (canceled).
92. (canceled).